

CLAIM

What I claim is:

1. A kind of transient voltage suppressor structure applicable to electronic components. The said transient voltage suppressor structure includes:

5 A basic substrate;

A conductive electrode that is placed on the basic substrate;

A variable impedance material that is placed on the conductive electrode;

An insulation layer that is placed on the variable impedance material and exposes a partial area of the variable impedance material; and

10 A conductive electrode is placed on the insulation layer and the exposed variable impedance material and connects with the variable impedance material.

2. The transient voltage suppressor structure as recited in claim 1, wherein the basic substrate is a glass.

15 3. The transient voltage suppressor structure as recited in claim 1, wherein the basic substrate is a ceramic material.

4. The transient voltage suppressor structure as recited in claim 1, wherein a contact face exists between the variable impedance material and the signal electrode to conduct the transient voltage to the ground electrode.

20 5. The transient voltage suppressor structure as recited in claim 1, wherein the insulation layer can prevent the point discharge occurring on the edge of the signal electrode.

6. The transient voltage suppressor structure as recited in claim 1, wherein the insulation layer is made from material with low dielectric constant, such as
25 oxide or metallic oxide.

7. The transient voltage suppressor structure as recited in claim 1, wherein

the structure of the insulation layer is in conformity with the profile of the variable impedance material.

8. A kind of transient voltage suppressor structure applicable to electronic components. The said transient voltage suppressor structure includes:

5 A basic substrate;

A signal electrode and a ground electrode that are placed on the basic substrate;

An insulation layer that is placed on the basic substrate between the signal electrode and the ground electrode;

10 A variable impedance material that is placed on the insulation layer between the signal electrode and the ground electrode and connects with the signal electrode and the ground electrode through the variable impedance material;

9. The transient voltage suppressor structure as recited in claim 7, wherein the basic substrate is a glass or a ceramic basic substrate.

15 10. The transient voltage suppressor structure as recited in claim 7, wherein a contact face exists between the variable impedance material and the signal electrode to conduct the transient voltage to the ground electrode.

11. The transient voltage suppressor structure as recited in claim 7, wherein the insulation layer covers the edge of the signal electrode to prevent the effect
20 of the point discharge occurring on the edge of the signal electrode.

12. The transient voltage suppressor structure as recited in claim 7, wherein the insulation layer is made from material with low dielectric constant, such as oxide or metallic oxide.

13. A kind of transient voltage suppressor structure applicable to electronic
25 components. The said transient voltage suppressor structure includes a basic substrate, each one signal and ground electrode placed on the basic substrate, a

insulation layer placed between the signal electrode and the ground electrode and a variable impedance material placed between the signal electrode and the ground electrode. The characteristics of the said transient voltage suppressor structure lie in that the edge of the signal electrode is covered by the insulation
5 layer and the transient voltage is conducted to the ground electrode through the contact face of the variable impedance material and the signal electrode.

14. The transient voltage suppressor structure as recited in claim 12, wherein the variable impedance material is placed on one end of the ground electrode, while the insulation layer is placed on the edge of the variable
10 impedance material and exposes the central part of the variable impedance material. One end of the signal electrode is placed on the insulation layer and the exposed variable impedance material.

15. The transient voltage suppressor structure as recited in claim 12, wherein the insulation layer is formed in a box structure.

16. The transient voltage suppressor structure as recited in claim 13, wherein the insulation layer is formed in a box structure.

17. The transient voltage suppressor structure as recited in claim 12, wherein the structure of the insulation layer is in conformity with the profile of the variable impedance material.

18. The transient voltage suppressor structure as recited in claim 13, wherein the structure of the insulation layer is in conformity with the profile of the variable impedance material.

19. The transient voltage suppressor structure as recited in claim 12, wherein the insulation layer is placed on the basic substrate between the signal
25 electrode and the ground electrode to cover the signal electrode, while the variable impedance material is placed on the insulation layer between the signal

electrode and the ground electrode and connects with the signal electrode and the ground electrode electrically.

20. The transient voltage suppressor structure as recited in claim 12, wherein the basic substrate is a glass or ceramic basic substrate.

5 21. The transient voltage suppressor structure as recited in claim 12, wherein the insulation layer is made from material with low dielectric constant, such as oxide or metallic oxide.

Approved for Release